INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2005/000488

A. CLASSIFICATION OF SUBJECT MATTER Int.Cl⁷ H01M8/04

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols) Int.Cl7 H01M8/04

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Jitsuyo Shinan Toroku Koho 1922-1996 Jitsuyo Shinan Koho 1994-2005 Kokai Jitsuyo Shinan Koho 1971-2005 Toroku Jitsuyo Shinan Koho

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	JP 2001-93551 A (Toshiba Corp.), 06 April, 2001 (06.04.01), Claims; column 4, lines 34 to 43; column 6, line 45 to column 7, line 43; column 10, line 37 to column 11, line 2; Figs. 7, 17	1-10
Y .	<pre>JP 57-185172 U1 (Nissan Motor Co., Ltd.), 24 November, 1982 (24.11.82), Claims; page 6, line 11 to page 7, line 3; Fig. 3 (Family: none)</pre>	1-10
А	JP 2001-313047 A (Yuasa Corp.), 09 November, 2001 (09.11.01), Claims; column 3, line 32 to column 4, line 31; Figs. 1 to 4 (Family: none)	1-10

×	Further documents are listed in the continuation of Box C.	×	See patent family annex.
* "A"	Special categories of cited documents: document defining the general state of the art which is not considered to be of particular relevance	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"E" "L" "O" "P"	earlier application or patent but published on or after the international filing date document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) document referring to an oral disclosure, use, exhibition or other means document published prior to the international filing date but later than the priority date claimed	"X" "Y" "&"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art document member of the same patent family
Date	of the actual completion of the international search 14 April, 2005 (14.04.05)	Date	of mailing of the international search report 10 May, 2005 (10.05.05)
	e and mailing address of the ISA/ Japanese Patent Office	Auth	norized officer
_	imile No.	Tele	phone No.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/JP2005/000488

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.	
A	JP 2003-109633 A (FOAMEX L.P.), 11 April, 2003 (11.04.03), Claims; column 11, line 50 to column 12, line 16	1-10	
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		·	

Form PCT/ISA/210 (continuation of second sheet) (January 2004)

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.
PCT/JP2005/000488

JP 2001-93551 A	2001.04.06	US 6506513 B1	2003.01.14
		EP 1087455 A2	2001.03.28
JP 2003-109633 A	2003.04.11	EP 1280219 A2	2003.01.29
	•	US 2003-8193 A1	2003.01.09
		.WO 2003-3493 A1	2003.01.09
		CN 1402369 A	2003.03.12
		CA 2390058 A1	2002.12.28
		KR 2003-3097 A	2003.01.09
		TW 557599 A	2003.10.11
		AU 2002-312061 A1	2003.03.03

Form PCT/ISA/210 (patent family annex) (January 2004)

国際調査報告

発明の属する分野の分類(国際特許分類(IPC)) Int.Cl.7 H01M8/04

B. 調査を行った分野

調査を行った最小限資料(国際特許分類(IPC))

Int.Cl.7 H01M8/04

最小限資料以外の資料で調査を行った分野に含まれるもの

日本国実用新案公報

1922-1996年

日本国公開実用新案公報

1971-2005年

日本国実用新案登録公報

1996-2005年

日本国登録実用新案公報

1994-2005年

国際調査で使用した電子データベース(データベースの名称、調査に使用した用語)

C. 関連する	と認められる文献	
引用文献の カテゴリー *	引用文献名 及び一部の箇所が関連するときは、その関連する箇所の表示	関連する 請求の範囲の番号
Υ .	JP 2001-93551 A (株式会社東芝) 2001.04.06, 特許請求の範囲、第4 欄第 34-43 行、第 6 欄第 45 行-第 7 欄第 43 行、第 10 欄第 37 行-第 11 欄第 2 行、図 7, 図 17	1–10
Y	JP 57-185172 U1 (日産自動車株式会社) 1982.11.24, 実用新案登録 請求の範囲、第6頁第11行-第7頁第3行、図3 (ファミリーなし)	1-10
A	JP 2001-313047 A (株式会社ユアサコーポレーション) 2001.11.09, 特許請求の範囲、第3欄第32行-第4欄第31行、図1-4 (ファミリーなし)	1-10

「 C欄の続きにも文献が列挙されている。

「 パテントファミリーに関する別紙を参照。

- * 引用文献のカテゴリー
- 「A」特に関連のある文献ではなく、一般的技術水準を示す もの
- 「E」国際出願日前の出願または特許であるが、国際出願日 以後に公表されたもの
- 「L」優先権主張に疑義を提起する文献又は他の文献の発行 日若しくは他の特別な理由を確立するために引用す る文献 (理由を付す)
- 「〇」口頭による開示、使用、展示等に言及する文献

- の日の後に公表された文献
- 「T」国際出願日又は優先日後に公表された文献であって 出願と矛盾するものではなく、発明の原理又は理論 の理解のために引用するもの
- 「X」特に関連のある文献であって、当該文献のみで発明 の新規性又は進歩性がないと考えられるもの
- 「Y」特に関連のある文献であって、当該文献と他の1以 上の文献との、当業者にとって自明である組合せに よって進歩性がないと考えられるもの
- 「&」同一パテントファミリー文献

「P」国際出願日前で、かつ優先権の主張の基礎となる出願 国際調査を完了した日 国際調査報告の発送日 10.05.2005 14.04.2005 4 K 9270 特許庁審査官(権限のある職員) 国際調査機関の名称及びあて先 日本国特許庁(ISA/JP) 小川 武 郵便番号100-8915 電話番号 03-3581-1101 内線 3435 東京都千代田区霞が関三丁目4番3号

国際調査報告

ン(続き). 用文献の テゴリー*	関連すると認められる文献 引用文献名 及び一部の箇所が関連するときは、その関連する箇所の表示	関連する 請求の範囲の番号
A	JP 2003-109633 A (フォーメックス エル ビー) 2003.04.11, 特許請求の範囲、第 11 欄第 50 行-第 12 欄第 16 行	1-10
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国際調査報告 パテントファミリーに関する情報

国際出願番号 PCT/JP2005/000488

JP 2001-93551 A	2001. 04. 06	US 6506513 B1	2003. 01. 14
		EP 1087455 A2	. 2001. 03. 28
JP 2003-109633 A	2003. 04. 11	EP 1280219 A2	2003. 01. 29
_		US 2003-8193 A1	2003. 01. 09
		WO 2003-3493 A1	2003. 01. 09
		CN 1402369 A	2003. 03. 12
		CA 2390058 A1	< 2002. 12. 28
		KR 2003-3097 A	2003. 01. 09
•		TW 557599 A	2003. 10. 11
		AU 2002-312061 A1	2003. 03. 03

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference NT1897PCT	FOR FURTHER ACTION	See item 4 below	
International application No. PCT/JP2005/000488	International filing date (day/month/year) 17 January 2005 (17.01.2005)	Priority date (day/month/year) 20 January 2004 (20.01.2004)	
International Patent Classification (8th See relevant information in Form F	n edition unless older edition indicated) PCT/ISA/237		
Applicant HITACHI, LTD.			

1.	This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).					
2.	This REPORT consists of a total of 4 sheets, including this cover sheet.					
	In the attached sheets, any referer to the international preliminary re	nce to the written opinion of the port on patentability (Chapte	he International Searching Authority should he read as a reference r I) instead.			
3.	This report contains indications or	elating to the following items	:			
	Box No. I	Basis of the report				
	Box No. Π	Priority				
	Box No. III	Non-establishment of opin applicability	ion with regard to novelty, inventive step and industrial			
	Box No. IV	Lack of unity of invention				
	Box No. V	Reasoned statement under applicability; citations and	Article 35(2) with regard to novelty, inventive step or industrial explanations supporting such statement			
	Box No. VI	Certain documents cited				
	Box No. VII	Certain defects in the inter	national application			
	Box No. VIII	Certain observations on the	e international application			
4.	The International Bureau will connot, except where the applicant mate (Rule 44bis.2).	nmunicate this report to designates an express request under	gnated Offices in accordance with Rules 44 <i>his</i> .3(c) and 93 <i>his</i> .1 but or Article 23(2), before the expiration of 30 months from the priority			
		-				
			Date of issuance of this report 22 August 2006 (22.08.2006)			
	The International Burea 34, chemin des Colo 1211 Geneva 20, Swi	mbettes	Authorized officer Masashi Honda			
Facsir	nile No. +41 22 338 82 70		e-mail: pt08@wipo.int			

Form PCT/IB/373 (January 2004)

TRANSLATION INTERNATIONAL SEARCHING AUTHORITY To: WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1) Date of mailing (day/month/year) Applicant's or agent's file reference FOR FURTHER ACTION NT1897PCT See paragraph 2 below Priority date (day/month/year) International application No. International filing date (day/month/year) 20.01.2004 17.01.2005 PCT/JP2005/000488 International Patent Classification (IPC) or both national classification and IPC Applicant HITACHI, LTD. This opinion contains indications relating to the following items: Box No. I Basis of the opinion Box No. II Priority Non-establishment of opinion with regard to novelty, inventive step and industrial applicability Box No. III Box No. IV Lack of unity of invention Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial Box No. V applicability; citations and explanations supporting such statement Box No. VI Certain documents cited Certain defects in the international application Box No. VII Box No. VIII Certain observations on the international application **FURTHER ACTION** If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered. If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCI/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later. For further options, see Form PCT/ISA/220. For further details, see notes to Form PCT/ISA/220. Authorized officer Name and mailing address of the ISA/JP

Telephone No.

Facsimile No.

Вο	Box No. I Busis of this opinion	
1.	 With regard to the lunguage, this opinion has been established on the basis of the international application i filed, unless otherwise indicated under this item. 	n the language in which it was
	This opinion has been established on the basis of a translation from the original language into the follow, which is the language of a translation furnished for the purposes	
	Rule 12.3 and 23.1(b)).	
2.	 With regard to any nucleotide and/or amino acid sequence disclosed in the international application invention, this opinion has been established on the basis of: 	and necessary to the claimed
	a. type of material	
	a sequence listing	
	table(s) related to the sequence listing	
	b. format of material	
	in written format	
	in computer readable form	
1	c. time of filing/furnishing	
·	contained in the international application as filed.	
	filed together with the international application in computer readable form.	
	furnished subsequently to this Authority for the purposes of search.	
3.	In addition, in the case that more than one version or copy of a sequence listing and/or table(s) rel furnished, the required statements that the information in the subsequent or additional copies is identified or does not go beyond the application as filed, as appropriate, were furnished.	ating thereto has been filed or cal to that in the application as
4.	4. Additional comments:	
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	citations and expla		c 43bis.1(a)(i) wit porting such state		ty, inventive s		ррисавину;
Statement	•						
Novelty (N	D	Claims _	1-10				YI
		Claims _	•		4.		NO
Inventive s	tep (IS)	Claims					· YI
		Claims _	1-10				NO.
Industrial a	applicability (IA)	Claims	1-10				YI
		Claims					NO
Citations and	explanations:		 				
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TRANSLATION INTERNATIONAL SEARCHING AUTHORITY To: WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1) Date of mailing (day/month/year) Applicant's or agent's file reference FOR FURTHER ACTION NT1897PCT See paragraph 2 below Priority date (day/month/year) International application No. International filing date (day/month/year) 17.01.2005 20.01.2004 PCT/JP2005/000488 International Patent Classification (IPC) or both national classification and IPC Applicant HITACHI, LTD. This opinion contains indications relating to the following items: Box No. I Basis of the opinion Box No. II Priority Non-establishment of opinion with regard to novelty, inventive step and industrial applicability Box No. III Box No. IV Lack of unity of invention Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial Box No. V applicability; citations and explanations supporting such statement Box No. VI Certain documents cited Box No. VII Certain defects in the international application Box No. VIII Certain observations on the international application **FURTHER ACTION** If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered. If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCI/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later. For further options, see Form PCT/ISA/220. For further details, see notes to Form PCT/ISA/220. Authorized officer Name and mailing address of the ISA/JP

Telephone No.

Вυ	x No. 1 Basis of this opinion
1.	With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
	This opinion has been established on the basis of a translation from the original language into the following language, which is the language of a translation furnished for the purposes of international search (under
	Rule 12.3 and 23.1(b)).
2.	With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
	a. type of material
	a sequence listing
	table(s) related to the sequence listing
	b. format of material
	in written format
	in computer readable form
	c. time of filing/furnishing
	contained in the international application as filed.
	filed together with the international application in computer readable form.
	furnished subsequently to this Authority for the purposes of search.
3.	In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4.	Additional comments:
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Citations and explanations supporting such statement	Row			de 43bis 1(a)(i) with reg	ard to novelty, inve		ial applicability;	
Novelty (N) Claims L-10 YES NO Claims NO Claims Claims NO Claims NO Claims NO Claims NO Claims NO Claims NO Claims Claims Claims Claims NO Claims NO Claims Claims Claims NO Claims NO Claims NO Claims And Claims NO Claims NO Claims NO Claims NO Claims And NO Claims O Claims NO Claims NO Claims NO Claims NO Claims NO Claims NO Claims NO Claims NO Claims NO Claims NO Claims NO Claims NO Claims NO Claims NO Claims NO Claims NO Claims NO Claims	∪X	citations and expla	mations sup	porting such statement				
Claims No 2. Citations and explanations: Document 1: JP, 2001-93551, Λ (TOSHIBΛ CORPORATION), 6 April, 2001 (06.04.01) Document 2: JP, 57-185172, UI (NISSAN MOTOR CO., LTD.), 24 November, 1982 About claims 1-10 Inventions related to claims 1-10 do not appear to be inventive on account of the documents 1 and 2 cited in the ISR. A liquid fuel container for fuel cell for pushing out a liquid fuel made up with a mixed solution of methanol and water by moving a fuel sealing member by the pressure of a sealed inactive gas is disclosed in the pointed part of the document 1, and the material of the fuel ceilings member is not disclosed. However, the liquid fuel container for fuel cell described in the document 1 and the fuel cell temperature control device described in the document 2 are common in the function of being a device in contact with the fuel of a fuel cell, and belong to similar technical fields, so that applying as a material for a piston which comes in contact with methanol fuel the PTFE, carbon material and covering member disclosed in the pointed part of the document 2 could easily have been conceived	1.	Statement		•				
Industrial applicability (IA) Claims Claims Claims Claims Claims Claims 1-10 YES Claims No 2. Citations and explanations: Document 1: JP, 2001-93551, Λ (TOSHIBΛ CORPORATION), 6 Λpril, 2001 (06.04.01) Document 2: JP, 57-185172, U1 (NISSAN MOTOR CO., LTD.), 24 November, 1982 About claims 1-10 Inventions related to claims 1-10 do not appear to be inventive on account of the documents 1 and 2 cited in the ISR. A liquid fuel container for fuel cell for pushing out a liquid fuel made up with a mixed solution of methanol and water by moving a fuel sealing member by the pressure of a sealed inactive gas is disclosed in the pointed part of the document 1, and the material of the fuel ceilings member is not disclosed. However, the liquid fuel container for fuel cell described in the document 1 and the fuel cell temperature control device described in the document 2 are common in the function of being a device in contact with the fuel of a fuel cell, and belong to similar technical fields, so that applying as a material for a piston which comes in contact with methanol fuel the PTFE, carbon material and covering member disclosed in the pointed part of the document 2 could easily have been conceived		Novelty (N)	Claims	1-10				YES
Industrial applicability (IA) Claims Claims 1-10 YES Claims 1-10 YES Claims NO 2. Citations and explanations: Document 1: JP, 2001-93551, A (TOSHIBA CORPORATION), 6 April, 2001 (06.04.01) Document 2: JP, 57-185172, UI (NISSAN MOTOR CO., LTD.), 24 November, 1982 About claims 1-10 Inventions related to claims 1-10 do not appear to be inventive on account of the documents 1 and 2 cited in the ISR. A liquid fuel container for fuel cell for pushing out a liquid fuel made up with a mixed solution of methanol and water by moving a fuel sealing member by the pressure of a sealed inactive gas is disclosed in the pointed part of the document 1, and the material of the fuel ceilings member is not disclosed. However, the liquid fuel container for fuel cell described in the document 1 and the fuel cell temperature control device described in the document 2 are common in the function of being a device in contact with the fuel of a fuel cell, and belong to similar technical fields, so that applying as a material for a piston which comes in contact with methanol fuel the PTFE, carbon material and covering member disclosed in the pointed part of the document 2 could easily have been conceived			Claims				I	NO
Industrial applicability (IA) Claims 1-10 Claims 1-10 YE Claims 1-10 YE Claims NO 2. Citations and explanations: Document 1: JP, 2001-93551, A (TOSHIBA CORPORATION), 6 April, 2001 (06.04.01) Document 2: JP, 57-185172, U1 (NISSAN MOTOR CO., LTD.), 24 November, 1982 About claims 1-10 Inventions related to claims 1-10 do not appear to be inventive on account of the documents 1 and 2 cited in the ISR. A liquid fuel container for fuel cell for pushing out a liquid fuel made up with a mixed solution of methanol and water by moving a fuel sealing member by the pressure of a sealed inactive gas is disclosed in the pointed part of the document 1, and the material of the fuel ceilings member is not disclosed. However, the liquid fuel container for fuel cell described in the document 1 and the fuel cell temperature control device described in the document 2 are common in the function of being a device in contact with the fuel of a fuel cell, and belong to similar technical fields, so that applying as a material for a piston which comes in contact with methanol fuel the PTFE, carbon material and covering member disclosed in the pointed part of the document 2 could easily have been conceived		Inventive step (IS)	Claims				<u></u>	YE
Claims Claims No Claims Claims No Claims Claims Claims No Claims Corrected to Claims 1-10 Cocument 2: JP, 57-185172, U1 (NISSAN MOTOR CO., LTD.), 24 November, 1982 About claims 1-10 Inventions related to claims 1-10 do not appear to be inventive on account of the documents 1 and 2 cited in the ISR. A liquid fuel container for fuel cell for pushing out a liquid fuel made up with a mixed solution of methanol and water by moving a fuel sealing member by the pressure of a sealed inactive gas is disclosed in the pointed part of the document 1, and the material of the fuel ceilings member is not disclosed. However, the liquid fuel container for fuel cell described in the document 1 and the fuel cell temperature control device described in the document 2 are common in the function of being a device in contact with the fuel of a fuel cell, and belong to similar technical fields, so that applying as a material for a piston which comes in contact with methanol fuel the PTFE, carbon material and covering member disclosed in the pointed part of the document 2 could easily have been conceived			Claims	1-10			1	NO
2 Citations and explanations: Document 1: JP, 2001-93551, A (TOSHIBA CORPORATION), 6 April, 2001 (06.04.01) Document 2: JP, 57-185172, U1 (NISSAN MOTOR CO., LTD.), 24 November, 1982 About claims 1-10 Inventions related to claims 1-10 do not appear to be inventive on account of the documents 1 and 2 cited in the ISR. A liquid fuel container for fuel cell for pushing out a liquid fuel made up with a mixed solution of methanol and water by moving a fuel sealing member by the pressure of a sealed inactive gas is disclosed in the pointed part of the document 1, and the material of the fuel ceilings member is not disclosed. However, the liquid fuel container for fuel cell described in the document 1 and the fuel cell temperature control device described in the document 2 are common in the function of being a device in contact with the fuel of a fuel cell, and belong to similar technical fields, so that applying as a material for a piston which comes in contact with methanol fuel the PTFE, carbon material and covering member disclosed in the pointed part of the document 2 could easily have been conceived		Industrial applicability (IA)	Claims	1-10				YE
Document 1: JP, 2001-93551, A (TOSHIBA CORPORATION), 6 April, 2001 (06.04.01) Document 2: JP, 57-185172, U1 (NISSAN MOTOR CO., LTD.), 24 November, 1982 About claims 1-10 Inventions related to claims 1-10 do not appear to be inventive on account of the documents 1 and 2 cited in the ISR. A liquid fuel container for fuel cell for pushing out a liquid fuel made up with a mixed solution of methanol and water by moving a fuel sealing member by the pressure of a sealed inactive gas is disclosed in the pointed part of the document 1, and the material of the fuel ceilings member is not disclosed. However, the liquid fuel container for fuel cell described in the document 1 and the fuel cell temperature control device described in the document 2 are common in the function of being a device in contact with the fuel of a fuel cell, and belong to similar technical fields, so that applying as a material for a piston which comes in contact with methanol fuel the PTFE, carbon material and covering member disclosed in the pointed part of the document 2 could easily have been conceived			Claims				1	NO
About claims 1-10 Inventions related to claims 1-10 do not appear to be inventive on account of the documents 1 and 2 cited in the ISR. A liquid fuel container for fuel cell for pushing out a liquid fuel made up with a mixed solution of methanol and water by moving a fuel sealing member by the pressure of a sealed inactive gas is disclosed in the pointed part of the document 1, and the material of the fuel ceilings member is not disclosed. However, the liquid fuel container for fuel cell described in the document 1 and the fuel cell temperature control device described in the document 2 are common in the function of being a device in contact with the fuel of a fuel cell, and belong to similar technical fields, so that applying as a material for a piston which comes in contact with methanol fuel the PTFE, carbon material and covering member disclosed in the pointed part of the document 2 could easily have been conceived	2.	Citations and explanations:						
		About claims 1-10 Inventions related to clacited in the ISR. A liquid fuel container for methanol and water by a disclosed in the pointed disclosed. However, the liquid fuel temperature control device in contact with the samaterial for a pistor covering member disclosed.	ims 1-10 or fuel comoving a part of the contained described of the contained of the contain	do not appear to be a comment of the document 1, and a comment 1 and a full for fuel cell described in the document a fuel cell, and becomes in contact we	R CO., LTD.), the inventive on a liquid fuel material of the material of the in the do ent 2 are commutations to similar	account of the canade up with a magnetic of a sealed of the fuel ceiling ocument 1 and the function in the function the function in the functi	982 documents I and inactive gas is gs member is no be fuel cell on of being a , so that applying the material and applying the control of th	et of
•								
				•				

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference NT1897PCT	FOR FURTHER ACTION	See item 4 below
International application No. PCT/JP2005/000488	International filing date (day/month/year) 17 January 2005 (17.01.2005)	Priority date (day/month/year) 20 January 2004 (20.01.2004)
International Patent Classification (8th See relevant Information in Form F	n edition unless older edition indicated) PCT/ISA/237	
Applicant HITACHI, LTD.		

1.	This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).			
2.	This REPORT consists of a total of 4 sheets, including this cover sheet.			
	In the attached sheets, any referent to the international preliminary re	ce to the written opinion of t port on patentability (Chapte	he International Searching Authority should he read as a reference r I) instead.	
3.	This report contains indications re	lating to the following items		
	Box No. I	Basis of the report	·	
	Box No. II	Priority	·	
	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability		
	Box No. IV	Lack of unity of invention		
	Box No. V	Reasoned statement under applicability; citations and	Article 35(2) with regard to novelty, inventive step or industrial explanations supporting such statement	
	Box No. VI	Certain documents cited		
	Box No. VII	Certain defects in the intern	national application	
	Box No. VIII	Certain observations on the	international application	
4.	4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis.2).			
			Date of issuance of this report 24 July 2006 (24.07.2006)	
	The International Burea 34, chemin des Colo 1211 Geneva 20, Swi	mbettes	Authorized officer Masashi Honda	
Facsimile No. +41 22 338 82 70			e-mail: pt08@wipo.int	

Form PCT/IB/373 (January 2004)

特許協力条約

発信人 日本国特許庁 (国際調査機関)

代理人

小川 勝男

様

REC'D 1 2 MAY 2005

PCT WIPO

あて名

〒104-0033

日本国東京都中央区新川一丁目3番3号第17荒井 ピル8階

PCT 国際調査機関の見解費 (法施行規則第40条の2) [PCT規則43の2.1]

発送日

(日,月,年)

10.05.2005

出願人又は代理人

NT1897PCT の書類記号

今後の手続きについては、下記2を参照すること。

国際出願番号

PCT/JP2005/000488

国際出願日 (日.月.年)

17. 01. 2005

優先日

20.01.2004 (日,月.年)

国際特許分類 (IPC) Int.Cl. 7 H01M8/04

出願人(氏名又は名称) 株式会社日立製作所

1. この見解告は次の内容を含む。

第 I 欄 見解の基礎

第Ⅱ欄 優先権

第Ⅲ欄 新規性、進歩性又は産業上の利用可能性についての見解の不作成

第IV柳 発明の単一性の欠如

PCT規則 43 の 2.1(a)(i)に規定する新規性、進歩性又は産業上の利用可能性についての見解、 それを裏付けるための文献及び説明

第VI欄 ある種の引用文献

第VII棚・国際出願の不備

第VD柳 国際出願に対する意見

2. 今後の手続き

国際予備審査の請求がされた場合は、出願人がこの国際調査機関とは異なる国際予備審査機関を選択し、かつ、その国 際予備審査機関がPCT規 66.1 の 2(b)の規定に基づいて国際調査機関の見解書を国際予備審査機関の見解書とみなさ ない旨を国際事務局に通知していた場合を除いて、この見解書は国際予備審査機関の最初の見解書とみなされる。

この見解書が上記のように国際予備審査機関の見解書とみなされる場合、様式PCT/ISA/220を送付した日か ら3月又は優先日から22月のうちいずれか遅く満了する期限が経過するまでに、出願人は国際予備審査機関に、適当 な場合は補正費とともに、答弁書を提出することができる。

さらなる選択肢は、様式PCT/ISA/220を参照すること。

3. さらなる詳細は、様式PCT/ISA/220の備考を参照すること。

見解告を作成した日

14.04.2005

名称及びあて先

日本国特許庁(ISA/JP)

郵便番号100-8915

東京都千代田区設が関三丁目4番3号

特許庁審査官(権限のある職員)

4 K 9270

小川 武

電話番号 03-3581-1101 内線 3435

様式PCT/ISA/237 (表紙) (2004年1月)

第1個 見解の基礎		_
1. この見解書は、下	記に示す場合を除くほか、国際出願の言語を基礎として作成された。	
一 この見解告は、 それは国際調		
2. この国際出願で開 以下に基づき見解	示されかつ請求の範囲に係る発明に不可欠なヌクレオチド又はアミノ酸配列に関して、 掛を作成した。	
a. タイプ	配列表	
	配列表に関連するテーブル	
b. フォーマット	一	
	ニ コンピュータ説み取り可能な形式	
c. 提出時期	一 出願時の国際出願に含まれる	
	この国際出願と共にコンピュータ読み取り可能な形式により提出された	
	一 出願後に、調査のために、この国際調査機関に提出された	
3. 「 さらに、配列: た配列が出願 あった。	を又は配列表に関連するテーブルを提出した場合に、出願後に提出した配列若しくは追加して提出 寺に提出した配列と同一である旨、又は、出願時の開示を超える事項を含まない旨の陳述書の提出が	し 5 5 ,
4. 補足意見:		
•		
•		
٠.		

第	V 柳 新規性、進歩性又は産業上の それを英付る文献及び説明	O利用可能性的	ついてのPCT規則 43 の 2.1(a) (i) に定める見解、	
1.	見解			1	
	新規性(N)	請求の範囲 請求の範囲	1-10		有無
	· 進歩性(IS)	請求の範囲 請求の範囲	1-10.		有無
	産業上の利用可能性(IA)	請求の範囲 請求の範囲	1-10		有無

2. 文献及び説明

文献 1 JP 2001-93551 A (株式会社東芝) 2001.04.06

文献 2 JP 57-185172 U1 (日産自動車株式会社) 1982.11.24

請求の範囲 1-10 について

請求の範囲 1-10 に係る発明は、国際調査報告で引用された文献 1 および文献 2 から 進歩性を有さない。

封入された不活性ガス圧により、燃料封入部材を移動させてメタノールと水の混合溶液からなる液体燃料を押し出す燃料電池用液体燃料収容容器が、文献 1 の指摘箇所に開示されており、燃料封入部材の材質が開示されていない。

しかしながら、文献1記載の燃料電池用液体燃料収容容器と文献2に記載された燃料電池の温度制御装置は、燃料電池の燃料と接触する装置という機能の点で共通するものであり、類似の技術分野に属するものであるので、メタノール燃料と接触するピストンの材料として文献2の指摘箇所に開示されている、PTFE、カーボン材、被覆材を適用することは、当業者であれば容易に想到し得たものである。

特 許 協 力 条 約

発信人 日本国特許庁(国際調査機関)

代理人

小川 勝男

様

REC'D 1 2 MAY 2005

PCT WIPO

あて名

〒104-0033

日本国東京都中央区新川一丁目3番3号第17荒井

ビル8階

PCT 国際調査機関の見解書 (法施行規則第 40 条の 2) [PCT規則43の2.1]

発送日

(日.月.年)

10.05.2005

出願人又は代理人

NT1897PCT の書類記号

今後の手続きについては、下記2を参照すること。

国際出願番号

PCT/JP2005/000488

国際出願日 (日.月.年)

17. 01. 2005

優先日

(日.月.年) 20.01.2004

国際特許分類 (IPC) Int.Cl.7 H01M8/04.

出願人(氏名又は名称) 株式会社日立製作所

1. この見解哲は次の内容を含む。

第1欄 見解の基礎

第11 棚 優先権

第皿欄 新規性、進歩性又は産業上の利用可能性についての見解の不作成

第IV欄 発明の単一性の欠如

PCT規則 43 の 2.1(a)(i)に規定する新規性、進歩性又は産業上の利用可能性についての見解、

それを裏付けるための文献及び説明

第VI柳 ある種の引用文献

第VI欄 国際出願の不備

第VII棚 国際出願に対する意見

2. 今後の手続き

国際予備審査の請求がされた場合は、出願人がこの国際調査機関とは異なる国際予備審査機関を選択し、かつ、その国 際予備審査機関がPCT規 66.1 の 2(b)の規定に基づいて国際調査機関の見解書を国際予備審査機関の見解書とみなさ ない旨を国際事務局に通知していた場合を除いて、この見解書は国際予備審査機関の最初の見解書とみなされる。

この見解書が上記のように国際予備審査機関の見解書とみなされる場合、様式PCT/ISA/220を送付した日か ら3月又は優先日から22月のうちいずれか遅く満了する期限が経過するまでに、出願人は国際予備審査機関に、適当 な場合は補正掛とともに、答弁沓を提出することができる。

さらなる選択肢は、様式PCT/ISA/220を参照すること。

3. さらなる詳細は、様式PCT/ISA/220の備考を参照すること。

見解患を作成した日

14.04.2005

名称及びあて先

日本国特許庁(ISA/JP) 郵便番号100-8915

東京都千代田区設が関三丁目 4番 3号

特許庁審査官 (権限のある職員)

4 K 9270

小川 武

電話番号 03-3581-1101 内線 3435

様式PCT/ISA/237 (表紙) (2004年1月)

第1欄 見解の基礎				
1. この見解咨は、下	記に示す	广場合を除くほか、国際出 願	何の言語を基礎として作成された。	•
「この見解書は、 それは国際調査			文を基礎として作成した。 .3及び23.1(b)にいう翻訳文の言語	春である。 ·
 この国際出願で開 以下に基づき見解 			不可欠なヌクレオチド又はアミノ	酸配列に関して、
a. タイプ	Г	配列表		
	Г	配列表に関連するテープル	ν.	• •
b. フォーマット	Г	· 各面		
		コンピュータ読み取り可能	追な形式	
c. 提出時期	r	出願時の国際出願に含まれ	ns	
	Г	この国際出願と共にコンロ	ピュータ読み取り可能な形式によ	り提出された
	Γ	出願後に、調査のために、	、この国際調査機関に提出された	
3. 「 さらに、配列 た配列が出願 あった。	表又は配 時に提出	2列表に関連するテーブルを 出した配列と同一である旨、	:提出した場合に、出願後に提出 又は、出願時の開示を超える事	した配列若しくは追加して提出し 質を含まない旨の陳述書の提出が
4. 補足意見:				
•	·			
		•		
			· ·	
				•
		,		

1. 見解	·	٠,	1	•
新規性(N)	請求の範囲 請求の範囲	1-10		有
進歩性 (IS)	請求の範囲 請求の範囲	1-10	• <u>• • • • • • • • • • • • • • • • • • </u>	有 無
産業上の利用可能性(IA)	請求の範囲 請求の範囲	1-10		有

2. 文献及び説明

文献 1 JP 2001-93551 A (株式会社東芝) 2001.04.06

文献 2 JP 57-185172 U1 (日産自動車株式会社) 1982.11.24

請求の範囲 1-10 について

請求の範囲 1-10 に係る発明は、国際調査報告で引用された文献 1 および文献 2 から 進歩性を有さない。

封入された不活性ガス圧により、燃料封入部材を移動させてメタノールと水の混合溶液からなる液体燃料を押し出す燃料電池用液体燃料収容容器が、文献1の指摘箇所に開示されており、燃料封入部材の材質が開示されていない。

しかしながら、文献1記載の燃料電池用液体燃料収容容器と文献2に記載された燃料電池の温度制御装置は、燃料電池の燃料と接触する装置という機能の点で共通するものであり、類似の技術分野に属するものであるので、メタノール燃料と接触するピストンの材料として文献2の指摘箇所に開示されている、PTFE、カーボン材、被覆材を適用することは、当業者であれば容易に想到し得たものである。

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION CONCERNING SUBMISSION OR TRANSMITTAL OF PRIORITY DOCUMENT

(PCT Administrative Instructions, Section 411)

Т	່ດ	:

OGAWA, Katsuo 8th Floor No. 17 Arai Building 3-3, Shinkawa 1-chome Chuo-ku, Tokyo 1040033 JAPON

Date of mailing (day/month/year) 01 April 2005 (01.04.2005)	
Applicant's or agent's file reference NT1897PCT	IMPORTANT NOTIFICATION
International application No. PCT/JP05/000488	International filing date (day/month/year) 17 January 2005 (17.01.2005)
International publication date (day/month/year)	Priority date (day/month/year) 20 January 2004 (20.01.2004)
Applicant	HITACHI, LTD. et al

- 1. By means of this Form, which replaces any previously issued notification concerning submission or transmittal of priority documents, the applicant is hereby notified of the date of receipt by the International Bureau of the priority document(s) relating to all earlier application(s) whose priority is claimed. Unless otherwise indicated by the letters "NR", in the right-hand column or by an asterisk appearing next to a date of receipt, the priority document concerned was submitted or transmitted to the International Bureau in compliance with Rule 17.1(a) or (b).
- 2. (If applicable) The letters "NR" appearing in the right-hand column denote a priority document which, on the date of mailing of this Form, had not yet been received by the International Bureau under Rule 17.1(a) or (b). Where, under Rule 17.1(a), the priority document must be submitted by the applicant to the receiving Office or the International Bureau, but the applicant fails to submit the priority document within the applicable time limit under that Rule, the attention of the applicant is directed to Rule 17.1(c) which provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.
- 3. (If applicable) An asterisk (*) appearing next to a date of receipt, in the right-hand column, denotes a priority document submitted or transmitted to the International Bureau but not in compliance with Rule 17.1(a) or (b) (the priority document was received after the time limit prescribed in Rule 17.1(a) or the request to prepare and transmit the priority document was submitted to the receiving Office after the applicable time limit under Rule 17.1(b)). Even though the priority document was not furnished in compliance with Rule 17.1(a) or (b), the International Bureau will nevertheless transmit a copy of the document to the designated Offices, for their consideration. In case such a copy is not accepted by the designated Office as the priority document, Rule 17.1(c) provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.

Priority date Priority application No. Country or regional Office or PCT receiving Office of priority document

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